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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,638	12/28/1999	MAQBOOLAHMED S. PATEL	15-IS-5286	1250

7590 05/07/2003

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EXAMINER

KIBLER, VIRGINIA M

ART UNIT	PAPER NUMBER
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2623

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DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/473,638

Applicant(s)

PATEL ET AL.

Examiner

Virginia M Kibler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-3, 5, 7-10, 12, 14-17, and 19 are rejected under 35 U.S.C. 102(a) as being anticipated by Huang (*PACS: Basic Principles and Applications*).

Regarding claim 1, Huang discloses a method for partial preprocessing of raw image data at an image acquisition workstation (Page 200, para. 2, lines 1-2) connected to the PACS system (Page 199, para. 1, lines 1-3) including receiving raw image data from an imaging modality (Page 199, para. 1, lines 1-3), storing predetermined preprocessing functions applicable to the raw image data (Page 219, para. 4), applying at least one and fewer than all of the preprocessing functions to the raw image data to form partially preprocessed raw image data (Page 219, para. 4, lines 10-14), and transmitting the partially preprocessed raw image data to a PACS network for storage in a preprocessing database (Page 219, para. 4, lines 1-3).

Regarding claim 7, Huang discloses an image acquisition workstation for a PACS (Page 199, para. 1, lines 1-3) and for partial preprocessing of raw image data (Page 200, para. 2, lines 1-2) including a computer (Page 199, para. 1, line 1), thereby a processing circuit, an imaging modality interface for receiving raw image data (Page 199, para. 3, lines 2-4), and a software

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memory coupled to the processing circuit (Page, 199, para. 1, line 1). The arguments analogous to those presented above for claim 1 are applicable to claim 7.

Regarding claim 14, Huang discloses a medical data network including an imaging modality, an image acquisition workstation and a PACS network interfaced to the image acquisition workstation (Page 200, para. 3, lines 1-5), the PACS network comprising a networked PACS image database, display workstation, and preprocessing database (Page 216, para. 2). The arguments analogous to those presented above for claim 7 are applicable to claim 14.

Regarding claim 2, Huang discloses the step of predetermining further comprises predetermining preprocessing functions including at least one frequency preprocessing function and at least one contrast preprocessing function (Page 222, para. 6 and Page 223, para. 1-3).

Regarding claims 3, 10, and 17, the arguments analogous to those presented above for claim 2 are applicable to claim 3, 10, and 17.

Regarding claims 5, 12, and 19, the arguments analogous to those presented above for claim 2 are applicable to claims 5, 12, and 19.

Regarding claims 9 and 16, the arguments analogous to those presented above for claim 2 are applicable to claims 9 and 16.

Regarding claim 8, Huang discloses the raw image data corresponding to an anatomical region, and wherein the at least one preprocessing function applied to form the partially preprocessed raw image data is selected based on the anatomical region (Page 222, para. 3-4).

Regarding claim 15, the arguments analogous to those presented above for claim 8 are applicable to claim 15.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (*PACS: Basic Principles and Applications*) as applied to claim 1 above, and further in view of Takeo et al. (6,231,246).

Regarding claim 4, Huang discloses applying preprocessing functions including frequency and contrast preprocessing functions (Page 222, para. 6 and Page 223, para. 1-3). Huang does not appear to specify using a frequency preprocessing function characterized by at least one of a RN, RE, and RT preprocessing parameter. However, Takeo et al. ("Takeo") teaches that it is known that RN, RE, and RT are frequency characteristics (Col. 10, lines 30-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the frequency preprocessing functions disclosed by Huang to include the characteristics taught by Takeo in order to explicitly state certain characteristics as a design choice.

Regarding claim 6, Huang discloses applying a contrast preprocessing function (Page 222, para. 6 and Page 223, para. 1-3). Huang does not appear to specify using a contrast preprocessing function characterized by at least one of a GT, GA, GC, and GS preprocessing parameter. However, Takeo teaches that it is known that GT, GA, GC, and GS are contrast

characteristics (Col. 7, lines 19-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the contrast preprocessing functions disclosed by Huang to include the characteristics taught by Takeo in order to explicitly state certain characteristics as a design choice.

5. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (*PACS: Basic Principles and Applications*) as applied to claim 7 above, and further in view of Takeo et al. (6,231,246).

Regarding claim 11, the arguments analogous to those presented above for claim 4 are applicable to claim 11.

Regarding claim 13, the arguments analogous to those presented above for claim 6 are applicable to claim 13.

6. Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (*PACS: Basic Principles and Applications*) as applied to claim 14 above, and further in view of Takeo et al. (6,231,246).

Regarding claim 18, the arguments analogous to those presented above for claim 4 are applicable to claim 18.

Regarding claim 20, the arguments analogous to those presented above for claim 6 are applicable to claim 20.


Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-4072. The examiner can normally be reached on Mon. -Thurs. 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

VK
May 3, 2003


AMELIA M. AU
SUPERVISORY PATENT EXAMINER
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